ABSTRACT

An improved spray head that is more effective and efficient at providing a wider range of desired spray distributions includes the following elements: (a) a plurality of fluidic oscillators, each oscillator having a fluidic circuit embedded in its top surface, with this circuit forming a path in which a fluid may flow through the oscillator, wherein these oscillators are stacked one on top of the other, with the sides of the oscillators being configured so that they stack such that the flow of fluid from adjoining oscillators in the stack have an angle of divergence between the centerlines of the planes defined by the flows from the outlets of the adjoining oscillators that is in the range of 2 – 5 degrees, (b) a plurality of cover plates, with each cover plate being proximate the top surface of one of the fluidic oscillators and attached to the oscillator so as to provide a seal against the flow of fluid from the oscillator's fluidic circuit, (c) a carrier assembly having a front and a rear surface and a cavity extending between these surfaces, with this cavity being configured so to receive and hold the stack of fluidic oscillators in the spray head, and (d) a stopper unit that attaches to the assembly's rear surface and seals it against leakage from the assembly's rear surface.